

REMARKS

Claims 1-13 and 18-21 are rejected. Claims 14-17 and 22-29 are withdrawn from consideration. Claims 1, 3 and 5-9 have been amended. Claims 2 and 5 have been canceled. Claims 1, 3, 4, 6-13, 18-21 are presently pending in the application, with Claims 14-17 and 22-29 withdrawn from consideration. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

The basis for the amendment of Claim 1 is found on page 3, line 21 of the specification and Claims 2 and 5 as originally filed. The amendment of Claim 22 is found on page 3, line 21 of the specification and Claim 23 as originally filed

Restriction Requirement:

The Examiner has required restriction to one of the following inventions under 35 U.S.C. 121:

I. Claims 1-21, drawn to recording element, classified in class 428, subclass 32.1.

II. Claims 22-29, drawn to method of printing, classified in class 347, subclass 105, indicating that the inventions are distinct because the inventions are related as product and process of use and the product as claimed can be used in a materially different process of using that product, (e.g., Using the recording element as wall paper or gift wrap). The Applicants respectfully traverse the restriction requirement.

As stated by the Examiner, Claim 1 is limited to a recording element and Claim 22 relates to a method of printing with the recording element. However, both independent claims claim a laminate adhesion improving solvent absorbing layer comprising an amine inactivated absorbing gelatin, wherein said amine inactivated absorbing gelatin comprises succinylated pigskin gelatin. Both independent claims are clearly limited to laminate adhesion layers which are solvent absorbing and contain succinylated pigskin gelatin. Therefore, it is suggested that commonality exists among the Groups identified by the Examiner with respect to laminate adhesion improving layers which are solvent absorbing and contain succinylated pigskin gelatin. Coextensive searching of the Groups would not prove seriously burdensome to the Examiner, but would instead be most efficient. Therefore, it is respectfully requested that the Restriction

Requirement be reconsidered and withdrawn and that all claims now pending be examined.

The Examiner has required an election of species under 35 U.S.C. 121 directed to the following patentably distinct species: A: Recording element having an overcoat layer (claims 11-13), and B: Recording element having an inner layer (claim 14-17). The Applicant elects species A without traverse.

In order that this response be complete, the Applicant confirms the telephone election of 09/23/2003 in which a provisional election of Group I, Species A, claims 1-13 and 18-21 was made with traverse. Claims 14-17 and 22-29 are withdrawn from further consideration by the Examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Rejection of Claims 1-3, 5-8, 10, 11, 18, 20 and 21 Under 35 U.S.C. §102(b):

The Examiner has rejected Claims 1-3, 5-8, 10, 11, 18, 20 and 21 under 35 U.S.C. 102(b) as being anticipated by Tang et al. (WO 00/53406), which discloses an ink jet receiving medium having a gelatin containing ink receiving layer, the source of the gelatin can be animal skin or bones, acid or alkaline processed gelatin, and gelatin derivatives such as phthalated, acetylated, carbamoylated, and succinated gelatin can be used for this application, different types of gelatin can be used in combination, the strength is preferably in the range of 150-350 bloom, a mordant is added to the ink receiving layer to improve water resistance of the printed image, the ink jet receiving medium further comprises an overcoat layer on the top of the ink receiving layer, and the ink receiving layer further comprises hydrophilic polymer.

Tang discloses a high gloss ink jet receiving medium with fast ink dry time, good dye fade resistance, good dimensional stability, and good durability. The coating comprises a polypeptide such as gelatin or modified gelatin with plasticizers to reduce the curl of the coated sheets at low humidity. A polyurethane dispersion is incorporated into the coating to increase the flexibility of the coating at low humidity and to reduce the tack of the coating at high humidity. The polymers can be crosslinked with one or a combination of crosslinkers such as trivalent metal ions, polyfunctional aziridine, and polyamide-epichlorohydrin resin. Tang fails to mention the use of a succinylated pigskin gelatin for use in the absorbent layer to improve laminate adhesion.

The present invention, as amended, comprises an ink recording element having at least one laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The element yields excellent ink imaging performance for a wide range of commercially available printing systems, especially with respect to laminate adhesion, while still maintaining such properties as image quality and differential gloss.

A claim is anticipated under 102(b) only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Applicants have amended claim 1 to include a laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The reference to Tang fails to mention laminate adhesion. Tang also fails to disclose that a succinylated pigskin gelatin, when incorporated into a solvent absorbing layer of an ink recording element, will provide improved laminate adhesion. Therefore, the rejection should be withdrawn.

Rejection of Claims 1-5, 10, and 21 Under 35 U.S.C. §102(b):

The Examiner has rejected Claims 1-5, 10 and 21 under 35 U.S.C. 102(b) as being anticipate by Poerschke (DE 197 21 238 A1), as Poerschke discloses an ink jet recording medium comprising an ink receiving layer containing modified gelatin, the source of the gelatin is bone or skin, the gelatin is modified with alkylene succinic acid, wherein the alkylene group has 8-25, preferably 8-16 carbon atoms, dodecenylsuccinic acid is a preferred example, and, since the gelatin used in the prior art is substantially identical to the gelatin used in the current application, the gelatin of the prior art inherently possesses the claimed bloom strength.

Poerschke discloses a succinylated gelatin for use in inkjet paper to produce a gelatin with improved miscibility with polymeric components found in inkjet coatings and which can maintain the desired properties of high gloss, color fastness, freedom from cracking, short dry time, absence of tackiness, low spotty appearance and which is easy, reproducible and low-cost to manufacture. Poerschke fails to disclose laminate adhesion or the use of succinylated pigskin gelatin to produce improved laminate adhesion.

The present invention, as amended, comprises an ink recording element having at least one laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The element yields excellent ink imaging performance for a wide range of commercially available printing systems, especially with respect to laminate adhesion.

A claim is anticipated under 102(b) only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Applicants have amended claim 1 to include a laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The reference to Poerschke fails to mention laminate adhesion. Poerschke also fails to disclose that a succinylated pigskin gelatin, when incorporated into a solvent absorbing layer of an ink recording element, will provide improved laminate adhesion. Therefore, the rejection should be withdrawn.

Rejection of Claims 1, 10-13, 18, 19 and 21 Under 35 U.S.C. §102(e):

The Examiner has rejected Claims 1, 10-13, 18, 19 and 21 under 35 U.S.C. 102(e) as being anticipated by Peternell et al. (US 6,420,016), indicating that Peternell discloses an ink jet recording sheet comprising a support bearing a gelatin containing absorption layer on the support, and an ink receiving layer on the absorption layer, in which the source of gelatin is pigskin or bone, derivativized gelatins such as phthalaoylated, acetylated or carbamoylated gelatin can be used, the absorption layer further comprises hydrophilic polymer such as polyvinyl alcohol, and therefore, since the gelatin used in the prior art is substantially identical to the gelatin used in the current application, the gelatin of the prior art inherently possesses the claimed bloom strength, the ink receiving layer is equivalent to the claimed overcoat layer, the ink receiving layer comprises cellulose ether such as hydroxyethyl cellulose and carboxymethyl cellulose, and/or vinyl latex such as copolymer of vinyl monomer and (meth)acrylamide.

Peternell discloses a recording sheet for ink jet printing comprising a support, onto which are coated, in addition to optional auxiliary layers, at least one gelatin containing absorption layer for the fixation of the ink liquid and on top

of the absorption layer one or more ink receiving layers, characterized in that the gelatin containing absorption layer comprises micelle forming compounds in a quantity from 10% by weight to 50% by weight relative to gelatin. The invention provides recording sheets for ink jet printing showing high ink absorbency, high ink absorption rate, excellent image quality, short drying times and "photo feel".

The present invention, as amended, comprises an ink recording element having at least one laminate adhesion improving solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The element yields excellent ink imaging performance for a wide range of commercially available printing systems, especially with respect to image quality, differential gloss, and laminate adhesion.

A claim is anticipated under 102(b) only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. Verdegaal Bros. V. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The Applicants have amended claim 1 to include a laminate adhesion improving layer which contains at least one solvent absorbing layer with an amine inactivated gelatin, specifically, succinylated pigskin gelatin. The reference to Peternell fails to mention laminate adhesion. Peternell fails to mention succinylated gelatin. Peternell also fails to disclose that a succinylated pigskin gelatin, when incorporated into a solvent absorbing layer of an ink recording element, will provide improved laminate adhesion. Therefore, the rejection should be withdrawn.

Rejection Of Claim 9 Under 35 U.S.C. §103(a):

The Examiner has rejected Claim 9 under 35 U.S.C. 103(a) as being unpatentable over Tang et al. (WO 00/53106), as applied to claims 1-3, 5-8, 10, 11, 18, 20 and 21, above, and, although Tang fails to disclose the amount of each type of gelatin when using combination of different types of gelatin, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results.

As discussed above, Tang discloses a high gloss ink jet receiving medium with fast ink dry time, good dye fade resistance, good dimensional stability, and good durability. The coating comprises a polypeptide such as gelatin or modified gelatin with plasticizers to reduce the curl of the coated sheets at low

humidity. A polyurethane dispersion is incorporated into the coating to increase the flexibility of the coating at low humidity and to reduce the tack of the coating at high humidity. The polymers can be crosslinked with one or a combination of crosslinkers such as trivalent metal ions, polyfunctional aziridine, and polyamide-epichlorohydrin resin. Tang fails to mention the use of a succinylated pigskin gelatin for use in the absorbent layer to improve laminate adhesion.

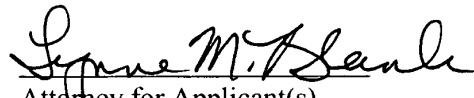
To establish a prima facie case of obviousness requires, first, there must be some suggestion or motivation, either in the references themselves, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art references (or references when combines) must teach or suggest all the claim limitations. The Applicants believe that Claim 9 benefits from dependency on Claim 1, which, as discussed above, is novel and unobvious. Tang fails to disclose the use of a succinylated pigskin gelatin to enhance the laminate adhesion of a solvent absorbing layer. Therefore, the reference fails to provide any motivation for using, specifically, succinylated pigskin gelatin in an ink absorbing layer to improve laminate adhesion. Neither does the reference provide any likelihood of success in improving laminate adhesion with the use of, specifically, succinylated pigskin gelatin. Finally, the reference fails to include the limitations of the claim specific to laminate adhesion and succinylated pigskin gelatin. Therefore the Applicants believe a prima facie case of obviousness has not been made.

As indicated by the Examiner, a prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. In re Boesch and Slaney, 205 USPQ 215. The specification provides evidence of surprising results with the use of succinylated pigskin gelatin. Table 2 on page 18 of the specification illustrates that the peel force required to remove layers of succinylated pigskin gelatin was markedly higher than the peel force required to remove layers containing unmodified gelatins as well as other gelatins made from pigskin. It was the unique combination of pigskin gelatin and succinylated gelatin into a single succinylated pigskin gelatin that provided the greatly improved laminate adhesion.

In summary, the Applicants believe that, in the absence of any disclosure relating to laminate adhesion or the unique performance of succinylated pigskin gelatin, a prima facie case has not been made. In the event that such a case has been made, the Applicants have provided evidence of surprising results. Therefore, the Applicants respectfully request that the Examiner reconsider and withdraw the rejection.

It is believed that the foregoing is a complete response to the Office Action and that the claims are in condition for allowance. Favorable reconsideration and early passage to issue is therefore earnestly solicited.

Respectfully submitted,


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